



Milne, R. G., and Gibb, K. (2016) Using economic analysis to increase civic engagement. *Contemporary Social Science*, (doi:10.1080/21582041.2016.1223870)

This is the author's final accepted version.

There may be differences between this version and the published version. You are advised to consult the publisher's version if you wish to cite from it.

<http://eprints.gla.ac.uk/122759/>

Deposited on: 15 August 2016

Using economic analysis to increase civic engagement

Robin Milne and Kenneth Gibb

Robin Gordon Milne

University of Glasgow

Adam Smith Business School (Economics)

Adam Smith Building

Glasgow G12 8RT

Tel: ++ 141 330 6084; Email: robin.milne@glasgow.ac.uk

Kenneth Gibb

University of Glasgow

Urban Studies

29 Bute Gardens

Glasgow G12 8RS

Tel: ++ 141 330 6891; Email: ken.gibb@glasgow.ac.uk

Key words

Financial Incentives, Marginal Analysis, Child Tax Credit, Working Tax Credit, Pension Credit, Housing Benefit, Spare-Room Subsidy, Payment by Results, National Health Service, Free School Meals.

Abstract

Two well established insights of economic analysis are applied to four case studies on civic disengagement: the use of incentives implicit in supply-and-demand analysis, and marginal analysis. The case studies comprise social security, housing benefit, hospital consultant outpatients and free school meals.

The case studies support the proposition that incentives can work or are thought to do so, and that takeup is higher, the larger the benefit. But other factors can over-ride, and significant proportions do not respond in the predicted way. In the case of the spare-room subsidy, the policy makers' goals were arguably unrealistic. In the case of Working Tax Credit and Pension Credit, the reasons are far from clear.

Marginal analysis is used to quantify how much it could cost to increase takeup, when takeup of a means tested benefit is already nearly universal, as it had been for Free School Meals among Primary School pupils. The chosen method, universal free provision for P1-P3 children, would seem disproportionate, unless the main reason for this policy has been to impact all children, and not just those who had been means tested. This case study shows the importance of marginal analysis when designing policies to increase civic engagement.

Introduction

Some years ago, reflecting on his experience as Economic Adviser to the two UK Governments, Alexander Cairncross encapsulated the contribution of economics to be supply-and-demand analysis and the marginal principle, recognising the role of incentives as an instrument of the market mechanism. Time has moved on, and so has the discipline. What we attempt here is to draw upon some of these early insights to understand what might influence civic engagement, and what the costs of doing so might be.

Four examples are used. The limited take up of means tested social security benefits has long been recognised (HMRC, 2015, table 2). The first example looks at recent data on the benefits to those that take up benefits and the cost to those that do not. Three of the four studied offer non-trivial benefits, but evidence of the limited takeup must make one wonder if there are serious issues in their administration. The second looks at housing benefit - also non-trivial – and the potential disincentive effects on takeup of some recent policy innovations. The third topic, attendance at out-patient clinics, also recognises the potential incentive effects of provider payment on their introduction of measures to increase uptake. The final topic looks at the cost of introducing universal provision, in this case of free school meals to the first three primary school classes. The paper concludes with a discussion of the observations made.

Welfare Benefits, Means Tests and Takeup¹

Economics

A starting point for economists concerning takeup is to compare the costs and benefits to applicants. Costs and benefits need not be financial but, if they are, then it is comparatively easy to test the hypothesis that takeup is an increasing function of benefits to costs. Tax Credits and Pension Credit provide an opportunity to do this, with the publication of their takeup rates by HM Revenue & Customs [HMRC]² and the Department of Work & Pensions [DWP]³, respectively. Tax Credits and Pension Credit are means tested but not taxable (UK, 2015a).

HMRC and DWP use similar procedures to estimate those eligible, and translate this in terms of the proportions of caseload and expenditure taken up; some of the details are different, as will become apparent. Administrative data are used to indicate those who took up benefits, and survey data to estimate those who were eligible but not claiming. Both sources give estimates of takeup, and identify 95% confidence intervals [CI], of the proportions of caseload and expenditure taken up. In addition, the DWP gives the mean values of those who claimed to compare with those who did not. We point out when the reports indicate differences in central estimates are statistically significant. All the data refer to the financial year 2013-14 unless otherwise stated. The two sources are taken in turn.

¹ This section has benefitted enormously from the annual Child Poverty Action Group publication CPAG (2014) and from comments on an earlier draft by the Department of Work & Pensions.

² See HMRC (2014)

³ See DWP (2015a & 2015b)

Tax Credits

HMRC administers Working Tax Credit and Child Tax Credit, and they share some common features with income tax administration, such as an annual system and the fact that they are based on gross (pre-tax) incomes. They were introduced in April 2003, and over the next five years are due to be replaced by Universal Credit (UK, 2015b). The test of means is based on the 'family', not the individual's income. Savings are not included in the test of means, except in so far as they generate interest payments. The reference period is the financial year, and is used to determine the family's means and what benefits it might be paid. As shown below, the two tax credits are combined for administrative purposes. To avoid generating excessive numbers of over- or underpayments, entitlement does not change when income increases or decreases between financial years by prescribed amounts.

Working Tax Credit [WTC]: tops up income for people aged 25 and working at least 30 hours per week; at least 16 hours or more for those aged 60 and over; and at least 16 hours for families with children and those with a disability, with couples with children additionally required to work 24 hours between them. 'Working' is taken to mean gainful employment, and in that sense WTC supports working people with low income. Households may be in receipt of Child Tax Credit as well as WTC. The maximum amount WTC is based on the following elements: the 'Basic element' was worth £1920 per annum in 2013-14 - the rates are a little higher now - with additional amounts for couples and lone parents at £1970 per annum; those working 30 hours a week at £790; and additional amounts for childcare and the disabled. So a couple working at least 30 hours a week and with no disabilities might have received as much as £4680 that year. Families are paid the maximum WTC when family income is below the 'income threshold'. In the financial year the 'income threshold' was £6420. Those with a higher income receive less, with a 'withdrawal rate' of 41% for any income above the threshold. Thus if family income were £7000, then the WTC would have been £4442.20⁴.

Child Tax Credit [CTC]: tops up income for low income families with children, whether or not the families are in work. It is available for children up to the age of 16 years, and to 19 years if in full-time non-advanced education or approved training. Families may be in receipt of Child Benefit as well as CTC. To put CTC in context, for most families⁵, Child Benefit was worth £20.30 per week for the first child and £13.40 for each subsequent child, irrespective of income, and was not taxable. CTC had a 'family element' worth £545 per year to which was added £2720 per year for each child, with additional help for disabled children. Again there is an income threshold for CTC. For families also claiming WTC, the threshold it is the same as for WTC only, namely £6420. For families, only claiming CTC is was £15,910 that year.

As noted above, the two tax credits are combined for administrative purposes. The £6420 is the point at which the taper applies to both WTC and CTC, if the family is in work (WTC is

⁴ £4442.20 = £4680 - (£7000 - £6420) * 0.41].

⁵ From January 2013 the net financial benefit from Child Benefit fell with income if applicants or their partners have had incomes in excess of £50,000 (UK, 2015c).

tapered first, then CTC); the £15910 figure is used to taper CTC only for out of work families. So the only point at which income is too high to qualify for WTC but low enough to qualify for maximum CTC is (for in-work families only) the exact income point at which WTC is tapered away to zero and CTC is still paid in full. Thus the maximum CTC for a family with, say, three children, none of whom were disabled would have been £8705⁶. If the family income had been £16,500, then the CTC paid would have been £8463.10⁷. These are large sums and, in addition, families eligible for the maximum CTC are also eligible for Free School Meals worth at least £330 per year per child about that time (Scottish Government, nd).

Data on the takeup of families with and without children by the amount of tax credit to which they are eligible are given in tables 1 and 2, respectively. Comparing families with children against families without children we find, for any given benefit range, that take up was higher for those with children. More significantly for the hypothesis being tested, within these two groups, in general, the larger the expected benefit, the higher the takeup rate. Almost all families with children eligible took tax credits worth £4000 and over that year. But most families with no children did not take up the tax credits for which they were eligible, even when there were worth at least £2000 that year.

[Insert table 1]

[Insert table 2]

Welfare Benefits

The DWP administers a variety of benefits. We concentrate on Pension Credit, as it is both clear how large the benefits can be⁸, and there is a like-for-like basis when comparing those who claimed against those who failed to do so⁹.

Pension Credit was introduced on 6 October 2003, and has two elements: Guarantee Credit and Savings Credit. Both are subject to a test of means: unlike WTC and CTC, assessment has been based on savings as well as income. Account was taken of savings in excess of £10,000. Guarantee Credit is available for both singles and couples, of whom at least one is over the Pension Credit qualifying age. The Pensions Credit qualifying age is set in line with the State Pension age for women, so some men may be eligible even if they are too young for the State Pension. The qualifying age was 61 years and six months (DWP, 2015a, p 13). The Savings Credit is available for those aged 65 year or over. The two elements are taken in turn.

⁶ £8705 = £545+(3*£2720).

⁷ £8463.10 = £8705-(£16,500-£15,910)*0.41.

⁸ Housing Benefit is an example when the potential size is the locally determined rent. See Kemp (2007, p 118) for a review of evidence of the hypothesis as applied to Housing Benefit.

⁹ Job Seeker's Allowance is an example where the size for those who claimed includes the contributory as well as the Income Based element; whereas the size for those who did not claim is just the Income Based element.

The Standard Minimum Guarantee for Guarantee Credit, puts a floor on the income for single people or couples who have reached the qualifying age and, if necessary, to top up those with no or low incomes. This floor was set at a weekly rate of £145.40 for single people and £222.05 for couples (DWP, 2015a, p 12). This compares with the largely contributory National Insurance Basic State Pension whose maximum value was £110.15 for individual pensioners. The basic State Pension may be supplemented by an additional voluntary State Pension such as the State Earnings Related Pension, and occupational and personal pensions. A single person who does not qualify for any additional amounts¹⁰, with only the maximum basic State Pension and savings below £10,000 would have been eligible for a weekly Guarantee Credit of £35.25¹¹.

The estimates of the caseload takeup rates for those eligible were 70% [CI: 66%, 75%] for single men, 71% [CI: 68%, 74%] for single women, and 66% [CI: 62%, 70%] for couples; it was significantly lower for couples than for single men or for single women (DWP 2015a, table 2.3.7 and section 2.3.9).

Data in table 3 give some idea of how large the weekly benefits were for those who claimed and those who did not. Mean values are given for the two groups by family type and, in the case of non-claimants, the median value. The mean values for non-claimants was lower than for claimants: for example, for single men they were £72 and £71, respectively; but the difference is not necessarily statistically significant. Notice also that the median values for non-claimants were less than the corresponding means: for example, for single men they were £55 and £71, respectively. This indicates that a preponderance of non-claimants were eligible for sums below the corresponding mean values. Whilst the evidence is suggestive that larger benefits encouraged claiming, especially among couples, the evidence is not supported by tests of statistical significance. Given that Guarantee Credit has been a passport to several benefits - perhaps most significantly to Housing Benefit¹² - it is surprising that the takeup rate was barely 70%.

[Insert table 3]

Savings Credit is designed to encourage those with low incomes to save. Unlike other benefits considered here, weekly payments are available for those reaching a *minimum* threshold. The weekly income thresholds were £115.30 and £183.90 for single people and couples, respectively. These thresholds are above the basic State Pension, but below the corresponding floors for the Guarantee Credit. Thus those eligible for Savings Credit could also be eligible for Guarantee Credit. Savings Credit, however, is limited to those aged 65 and over, and to that extent is *not* available for *all* those eligible for the Guarantee Credit. The ‘maximum savings credit’ was £18.06 and £22.89 weekly for single people and couples,

¹⁰ A Pension Credit recipient may qualify for additional amounts if they are disabled, having caring responsibilities, or responsibility for paying certain housing costs.

¹¹ £35.25 = £145.40-£110.15.

¹² Worth on average £90 per week for those who claimed and £50 for those who did not (DWP, 2015a, table 5.3.2).

respectively. Working out how large it might be is more complicated than for Guarantee Credit.

If the claimant's income is below the Standard Minimum Guarantee, then the Savings Credit would be 60% for any income in excess of its threshold, upto the maximum amount. Thus a single person with a weekly income of £130 would be eligible for not only a Guarantee Credit of £15.40¹³, but also for £8.82¹⁴ as Savings Credit. On the other hand, if the applicant's income is too high to qualify for Guarantee Credit, then a deduction is made, based at 40% of the difference between their Appropriate Minimum Guarantee (the standard Minimum Guarantee plus any additional amounts the applicant is entitled to) and that income. Thus for a single person with a weekly income of £150, there would have been a deduction of £1.84¹⁵ from the potential Savings Credit of £18.06. This means they would have been entitled to £16.22¹⁶ of Savings Credit.

The estimates of the caseload takeup rates for those eligible were 51% [CI: 46%, 58%] for single men, 47% [CI: 44%, 52%] for single women, and 43% [CI: 39%, 47%] for couples. Takeup was significantly lower for couples than for single men or single women (DWP, 2015a, table 2.3.10 and section 2.3.12). Takeup was also lower for Savings Credit than for Guarantee Credit but, as can be seen from table 3, this is consistent with its very much lower benefits.

Conclusions

The analysis shows that family characteristics are one among several possible influences on takeup (Eurofound, 2015). Thus families with children had higher takeup rates for Tax Credits, and single people had higher takeup rates than couples for Pension Credit. This complicates attempts to test whether takeup is an increasing function of the size of benefits. Nevertheless, when there is correction for family type, the evidence points in this direction, though no tests of statistical significance were published.

Housing Benefit and Incentives

One area of inquiry is why eligible recipients to means-tested benefits do not make full use of that eligibility (Gibb, 2016). Issues of stigma, the quality of information dissemination regarding benefit entitlement, bureaucratic complexity (e.g. translating changing individual economic circumstances into new entitlements), and small financial returns when recipients are only entitled to small amount of tapered-off benefits (though in-work receipt of benefits has risen markedly in recent years) – all may contribute to lower take-up rates.

A further important dimension is welfare reform. This is a cumulative strategy or package of reforms of means-tested working age benefits, which seek to simplify the system, reduce long term spending on such benefits and encourage work incentives. In other words, the latter

¹³ £15.40 = £145.40-£130.

¹⁴ £8.82 = (£130-£115.30)*0.60.

¹⁵ £1.84 = (£150-£145.40)*0.40.

¹⁶ £16.22 = £18.06-£1.84.

objective indicates that there is a belief held by policy makers that redesigning benefit can encourage change in behaviour through the application of economic incentives. Below, we briefly consider one of these housing-related reforms: the spare-room subsidy (or bedroom tax, as it is colloquially known). These reforms may also of course impact on the drivers of eligible benefit take-up.

The context is the rapid rise in the cost of housing benefit (HB) from £11 billion in 2000-01 to £21 billion in 2010-11 to more than £24 billion in 2014-15 (reported in Gibb, 2016). Much of this growth has come in the private rented sector, which has expanded greatly in the last 15 to 20 years (and where rents are considerably higher). When the Coalition Government was elected in 2010 it rapidly moved to a focus to reduce the large public funding deficit it faced and within that strategy, HB was considered a priority target. Later, further changes to working age benefits associated with the 2012 Welfare Reform Act, proposed further radical changes such as the introduction (now underway) of Universal Credit, a single benefit that would incorporate half a dozen of the main means-tested benefits and tax credits, including HB (though dealing with housing costs is acknowledged to be highly problematic because of local variation in the cost of housing).

We will here focus on one specific aspect of the reforms: Spare-room subsidy (or bedroom tax) involved a decision to reduce the housing benefit level available to working age social tenants who were deemed to be consuming excessive housing space. If they had an excess of one room, their HB would be cut by 14% and if more than one room, their HB would fall by 25%. The policy was articulated as an attempt to encourage affected households to find smaller accommodation (known as downsizing), or move out the social sector altogether or get off HB by increasing employment income. Skeptics argued that the lack of alternative accommodation meant that the reduction in benefit was a compulsory levy or tax under another name.

The policy objective for the HB reduction for excess housing space consumption of course has an important grain of truth to it – that it is important to balance household size with accommodation size in order to efficiently utilize the existing housing stock (and to avoid situations where over-consumptions of rooms sits along side over-crowding elsewhere) and that once a tenancy is created it is not obvious what mechanism will encourage a shrinking family to move to better sized accommodation, thereby freeing the space for larger households. However, at the same time it is recognised that this is also viewed as an incentive structure designed to cut the HB bill by encouraging affected households to either (a) down-size to a smaller property with a lower rent and therefore a reduced HB liability; (b) to move to smaller properties in the private rented sector (though this may or may not reduce the HB bill – it depends on the relative rents); (c) take employment or more employment so that the household does not rely on HB in the first place, thus saving HB from the DWP's point of view¹⁷; or, (d) do nothing and take the hit of the reduced HB support.

¹⁷ They might also be able to take in a lodger though this may of itself reduce HB eligibility by affecting the household income calculation

There are three important caveats. Housing supply has greatly changed over the last few decades in the social rented sector. They are simply far fewer smaller units e.g. one bedroom properties, as these for many years were widely agreed to be unsuitable and moreover a spare room was generally considered to be a reasonable and normal expectation¹⁸. Second, it has transpired since the launch of the charge in April 2013 that the social rented sector has a disproportionate number of disabled or long term sick working age households claiming HB who may have additional or specialist space requirements which require an extra room. As much as a majority of all those affected may be in this situation. Third, households under-occupying are generally not found in the social rented sector but in the owner-occupied sector. Within social renting, the much larger problem concerns the under-occupation of retired households rather than those of working age.

Gibb (2015) reports Scottish evidence that the numbers potentially affected were lower than anticipated in the first year of the policy but that the capacity of the system to allow tenants to downsize within social renting was highly restricted and with reasonable assumptions about vacancies and relative priorities for re-housing, could easily take 5-10 years to resolve the starting volume of under-occupiers receiving HB in Scotland.¹⁹ Qualitative evidence also suggested that for some downsizing by moving to smaller properties in the rental market and receiving Local Housing Allowance (the equivalent of HB for private renters) may end up costing the welfare bill more because market rents are so much higher than social rents.

The DWP has funded independent ex post evaluation research on the spare room subsidy (CCHPR, 2015). The study found that:

- After 9 months, the majority of those who originally faced a cut in HB because of under-occupation, still faced the spare room subsidy charge.
- Only one in five of those no longer affected said they had entered employment and thus come off HB.
- Only 0.3% of affected tenants took lodgers. Much more important was cutting back elsewhere – on energy, food and travel. There is an inelasticity associated with housing or shelter, which means those affected have to reduce their non-housing consumption because staying where they are is in practice the priority.
- One reason is the lack of alternative accommodation. While downsizing is being prioritised across England, there was a widely recognised shortage of smaller properties and landlords were also experiencing difficulty letting larger vacant properties.

One key conclusion from this brief discussion is that it is not easy to design incentives to work with the market or with household behaviour. Perhaps this is in part because the objectives of saving money and the ex ante impact assessment work did not have the

¹⁸ Starting the spare room subsidy penalty at 2 or more rooms might have been more acceptable?

¹⁹ The Scottish Government decided to fully mitigate the cost of the spare room subsidy by topping up from its own resources transitional discretionary housing payments from DWP for help with those facing hardship. Interestingly, many English authorities (the scheme is run by councils) consider the LHA cuts to be more important and have diverted these funds to the private rented sector. In Scotland all of the funds go to meet the cost of the spare room subsidy so that in theory no-one should be financially worse off.

supporting evidence available to underpin what was being proposed. A striking contrast is to be found between the DWP impact assessment of welfare reform (DWP, 2011 and 2012) and those of the critical Scottish government, the latter largely refuting the UK Government's ex ante appraisal of the effects of its welfare reforms, including the spare room subsidy (SGCAS, 2011).

Using Incentives to Improve Attendance at Hospital Clinics

Payment by Results is a mechanism for reimbursing NHS providers in England. It started on a pilot basis to cover provider costs, including outpatient activity in the financial year 2004-05, and was extended to all providers in the financial year 2006-07 (DoH, 2012, fig 27).

Payment is set prospectively and based on the average of historic cost of the activity for all providers, with uniform adjustments for annual changes in prices and expected efficiency improvements, and uprated by the Market Forces Factor assigned to each provider depending on its geographic location. The scheme has not been adopted in this form in the rest of the UK, though similar arrangements may be found in other countries.

Raftery et al (1996) suggests that, prior to the introduction of Payment by Results, most hospitals in England were paid on the basis of 'sophisticated block' or 'cost and volume' contracts. Adjustments for activity over the planned level were based on marginal cost, which could be from 10% to 50% of average cost, with the latter set retrospectively.

Farrar et al (2009) finds evidence of that in its early days Payment by Results had an incentive to make inpatient activity more efficient in terms of reducing length of stay, based on three sets of comparisons, one comparing England and Scotland.

Data on the effect on provider income of an additional outpatient attendance from switching to Payment by Results is given in table 4 for two common specialties. Payment was larger for new than for return outpatients. If there had been no adjustment in the past when actual activity was different from that planned, then the additional income would be set at 100%. Raftery et al (1996) has suggested that there had been an adjustment from 10% to 50%. In these cases the additional income would be set at 90% and 50%, respectively. In the financial year 2014-15 the Market Forces Factor could raise payment rates by as much as 30% (Monitor and NHS England, 2013b, figure 2).

Insert table 4

New outpatient activity largely depends on GP referrals, which in turn could depend, for any given provider, on its range and perceived quality of services. Return/review appointments, on the other hand, could be more directly influenced by the provider. In terms of incentives, providers wishing to increase outpatient activity for *new* outpatients might reasonably focus on reducing DNA and patient and hospital cancellation rates. There would be a similar incentive for *return* outpatient activity, but providers could also recourse by increasing the return: new ratio.

Last minute reminders and 'patient focussed booking', also known as 'partial booking', are two ways DNA rates could be reduced. Two studies of events in Scotland give orders of

magnitude of the cost per DNA avoided, against which the net income providers can expect to receive. One study of paediatric care for a variety of specialties found SMS text reminders, when patient focussed booking was in place, cost £7.50 [£10.00 in 2014-15 prices²⁰] for new outpatients when the DNA rate was 4.7%; but had no impact on return outpatients prior to the introduction of patient focussed booking (Milne et al, 2006). The other study found the cost to be £15.13 [£17.48 in 2014-15 prices] per DNA avoided for non-psychiatric specialties under patient focussed booking whose DNA rate was approximately 10% (Milne, 2010, table 4). Both these estimates are well below the expected additional income providers might expect under Payment by Results from sending last minute reminder to new outpatients.

Free School Meals [FSMs]: the Cost of Extending to Universal Provision²¹

In January 2015 the Scottish Government introduced Free School Meals [FSMs] for all primary children in stages P1-P3. A similar initiative was introduced in England a few months before. Some years earlier a report by an expert committee in Scotland identified a number of issues, one of which is the stigma attached to the means tested FSMs programme which discouraged takeup (O'Neill, 2003, section 4). One remedy was the statutory requirement that schools introduce an anonymous system by August 2008. Universal provision was identified as another remedy among those who would otherwise have been eligible under the means tested arrangements. A trial was set up in Scotland the school year 2007-08 for stages P1-P3 at five of the its 32 Local Authorities, selected for the variety of their characteristics, for example, the proportion of primary school pupils registered for FSMs varied from around 9% in the Scottish Borders to 35% in Glasgow (MacLardie et al, 2008, table 3.1). What follows builds upon the evaluation of this trial.

One of the striking features of the evaluation is the fairly modest increase in uptake - just 4.4 percentage points for those registered for FSM in stages P1-P3 taking the five Local Authorities together - at the cost in terms of potentially lost revenue from the 68.9 percent of those who would otherwise have had to pay (MacLardie et al, 2008, table 3.6). The increase in an uptake of 1.1 percentage points among P4-P7 pupils registered for FSMs might arguably also be attributed to the trial. Looking at proportions can be misleading. The aim in this paper is to calculate the number of registered FSM pupils who benefitted from the Trial and compare it with the cost of all those not registered who now had free school meals. We explore this for each of the five Local Authorities.

There was little change in the primary school population over the period of the evaluation for any of the Local Authorities studied. Because of our interest in P4-P7 as well as P1-P3 pupils, we use the September 2007 census on school rolls which gives a breakdown by stage (Scottish Government, 2008, table 6.4). Reported uptake in the evaluation is based on those present – not on those on the roll - and so some adjustment is required for non-attendance.

²⁰ Adjustment made using the Consumer Price Index.

²¹ Those wishing to read a more wide ranging evaluation are referred to Beaton et al (2014).

We are able to do this for the school meals census in February 2008 and assume it is the same before the trial started. Attendance varies modestly by Local Authority and whether the pupil was registered for FSMs, but hardly at all by stage, taking Scotland and the school year as a whole (Scottish Government, 2009, table 1.2). Using these assumptions it is possible to estimate the additional number of P1-P3 and P4-P7 registered FSM pupils who benefitted from the trial, and the number of P1-P3 non-registered FSM pupils who benefitted from the school meals that were now free. These numbers are given in table 5.

Insert Table 5

The cost of the trial has two elements: the loss of revenue from charges for pupils who took meals before the trial, and the cost of providing additional meals to those others for whom they were now free. The evaluation gives information on both. In respect of the cost of provision, it refers to the extra cost of the meals and, in the case of equipment, the full cost of capital is applied to the first 100 days. The data given below are a revised set of estimates. Equipment costs are put on an annual basis, and then amortised assuming an eight year life and 0.035 discount rate per annum as recommended HM Treasury. The third set of unit costs are taken from the annual report on School Meals, comparing annual costs and the number of meals, and are not used later in generating the results in table 7. They are presented purely to give some idea of how costs vary for the whole school year. None of these financial data should be understood to indicate the respective efficiency of Local Authorities. The three sets of unit cost data, in 2007-08 prices, are given in table 6.

Insert Table 6

The data given above draw upon two school meal censuses: one day in October 2007 and another day in February 2008. Additional meals imply additional pupils taking school meals that day. Thus in generating the cost of an additional meal, we are actually referring to an additional pupil. This should be born in mind when data in tables 5 and 6 are combined in table 7 to give the cost per additional meal among primary pupils who would have been registered for FSMs. The data are given in 2007-08 prices, to correspond to the information contained in the evaluation. The data in 2014 prices are uprated by 10% for the cost of preparing the meal (Office of National Statistics, undated), and to reflect current charges by Local Authorities.

Insert table 7

It is clear that the cost of increasing uptake – for example, £47 for Glasgow in 2007-08 - is very much larger than the cost of a standard school meal, whether at the time of the trial - £2.29 - or today. In fact, it is perhaps surprising that universal FSMs could be expect to do much to increase uptake among those registered. Already nearly 90% of registered pupils present at the school took advantage of the free meal, and this had been the case for a number of years before the trial (Scottish Government, 2008, table 2). The case for universal provision for P1-P3 pupils must have some other justification. One possibility is to encourage *all* pupils to take a school meal, as a way to introducing young children to a healthy diet: after all, possibly charges deterred a significant proportion of those not

registered. Another possibility is that means tested FSM provision does not reach the very poorest, for whatever reason (Morelli and Seaman, 2010), in particular they may have in mind children whose parents failed to register them as eligible.

References

- Beaton, M, N Craig, E Wimbush, P Craig, V Katikireddi, R Jepson and A Williams (2014) Evaluability Assessment of Free School Meals for all Children in P1 to P3.
[https://www.researchgate.net/publication/281584653_Evaluability_Assessment_of_Free_School_Meals_for_P1-3_schoolchildren_in_Scotland. Accessed 30 December 2015.]
- Cambridge Centre for Housing and Planning Research (2015) Evaluation of the Removal of the Spare Room Subsidy. Final Report. DWP: London.
- Child Poverty Action Group (2014) Welfare Benefits and Tax Credits Handbook, 2013/14. Child Poverty Action Group: London.
- Department for Work & Pensions (2011) Household Benefit Cap: Equality Impact Assessment. The Stationery Office: London.
- Department for Work & Pensions (2012) Housing Benefit: Under-occupation of Social Housing Impact Assessment. DWP: London
- Department for Work & Pensions (2015a) Income Related Benefits: Estimates of Take-up – Financial Year 2013/14 (experimental).
[https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/437501/ir-benefits-take-up-main-report-2013-14.pdf. Accessed 13 November 2015.]
- Department for Work & Pensions (2015b) Income Related Benefits: Estimates of Take-up – Financial Year 2013/14 (experimental): Technical Report.
[https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/437602/ir-benefits-2013-14-tech-report-v2.pdf. Accessed 20 November 2015.]
- Department of Health (2012) A Simple Guide to Payment by Results.
[https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/213150/PbR-Simple-Guide-FINAL.pdf. Accessed 27 January 2015.]
- Eurofound (2015) Access to Social Benefits: Reducing non-take-up. Publications Office of the European Union: Luxembourg.
- Farrar, S, D Li, M Sutton, M Chalkley, J Sussex and A Scott (2009) ‘Has payment by results affected the way English hospitals provide care? Difference-differences analysis’, British Medical Journal, 339: b3047.
- Gibb, K (2015) The Multiple Failures of the UK Bedroom Tax, International Journal of Housing Policy, 15(2), pp 148-66.
- Gibb, K (2016) ‘Housing Benefit: slow on the take-up?’ Mimeo, University of Glasgow.
- Gibb, K, Sprigings, N, Wright, S and McNulty, D (2014) Evidence Review of the Impacts of UK Welfare Reform affecting Housing. Report to the Scottish Government Housing and Regeneration Division: Glasgow

Gibb, K, Stephens, M, Reusche, D, Wright, S, Besmer, K and Sosenko, F (2016) *Housing and Work Incentives*. York: Joseph Rowntree Foundation.

HM Revenue & Customs (2015) Child Benefit, Child Tax Credit, and Working Tax Credit Take-up rates 2013 to 2014. [<https://www.gov.uk/government/statistics/child-benefit-child-tax-credit-and-working-tax-credit-take-up-rates-2013-to-2014>. Accessed 23 December 2015.]

Kemp, P A (2007) 'Housing Benefit in Britain' in P A Kemp (Editor) Housing Allowance in Comparative Perspective. Policy Press: Bristol, pp 105-33.

MacLardie et al (2008) Evaluation of the Free School Meals Trial for P1 to P3 Pupils, Scottish Government. [<http://www.scotland.gov.uk/Publications/2008/08/29114033/0>. Accessed 9 February 2015.]

Milne, R, M Horne and B Torsney (2006) 'SMS reminders in the UK National Health Service: an evaluation of its impact on "No Shows" at hospital out-patient clinics', Health Care Management Review, 31(2), pp 130-6.

Milne, R (2010) 'Reducing non-attendance at specialist clinics: an evaluation of the effectiveness and cost of patient-focussed booking and SMS reminders at a Scottish health board', International Journal of Consumer Studies, 34, pp 570-80.

Monitor and NHS England (2013a) 2014/15 National Tariff Payment System: Annex 5A National Prices. [https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/300551/Annex_5A_National_Prices.xlsx. Accessed 25 January 2016.]

Monitor and NHS England (2013b) National Tariff Payments System, 2014/15, Annex 6A: Market Forces Factor. [https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/300859/A_guide_to_the_Market_Forces_Factor.pdf. Accessed 25 January 2016.]

Morelli, C L and P T Seaman (2010) 'Devolution as a policy crucible: the case of universal free school meals', Poverty & Public Policy, 2(1), article 7.

Office of National Statistics (undated) Services Producer Price Index, SPPI: 56.20: Canteens and Catering.

O'Neill, M (2003) Hungry for Success: Final Report of the Expert Panel on School Meals, [<http://www.scotland.gov.uk/Resource/Doc/47032/0023961.pdf>. Accessed 9 February 2015.]

Raftery, J, R Robinson, J-A Mulligan and S Forrest (1996) 'Contracting in the NHS Quasi-market', Health Economics, 5: pp 353-62.

Scottish Government (2008) School Meals in Scotland, 2008.
[<http://www.scotland.gov.uk/Publications/2008/12/18120723/0>. Accessed 9 February 2015.]

Scottish Government (2009) Attendance and Absence in Scottish Schools 2007/08.
[<http://www.scotland.gov.uk/Publications/2008/12/18120723/0>. Accessed 9 February 2015.]

Scottish Government (nd) Free School Lunches.
[<http://www.gov.scot/Topics/Education/Schools/HLivi/schoolmeals/FreeSchoolMeals>.
Accessed 3 December 2015.]

Scottish Government Communities Analytical Services (2011) Housing Benefit Changes Scottish Impact Assessment. Scottish Government: Edinburgh.

United Kingdom (2015a) Income Tax: Tax-free and Taxable State Benefits
[<https://www.gov.uk/income-tax/taxfree-and-taxable-state-benefits>. Accessed 18 November 2015.]

United Kingdom (2015b) Universal Credit: Claiming other Benefits. [
<https://www.gov.uk/universal-credit/claiming-other-benefits>. Accessed 7 December 2015.]

United Kingdom (2015c) High Income Child Benefit Tax Charge.
[<https://www.gov.uk/child-benefit-tax-charge/pay-the-charge>. Accessed 19 November 2015.]

United Kingdom (nd) Tables confirming Tax and Tax Credit Rates and Thresholds for 2013-14.
[https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/221557/as2012_tax_and_tax_credit_rates_and_thresholds_051212.pdf. Accessed 7 December 2015.]

Table 1 Working Tax Credit and Child Tax Credit caseload takeup rates for families with children, by ‘modelled entitlement’, UK, financial year 2013-14 (%)

Entitlement	Caseload takeup rate		
	Lower bound	Central estimate	Upper bound
Under £1000	45	53	64
£1000-£2000	47	55	65
£2000-£4000	81	85	89
£4000 and over	90	93	95

Source: HMRC (2015, table 5).

Note: lower and upper bounds refer to 95% confidence intervals.

Table 2 Working Tax Credit caseload takeup rates for families without children, by ‘modelled entitlement’, UK, financial year 2013-14 (%)

Entitlement	Caseload takeup rate		
	Lower bound	Central estimate	Upper bound
Under £1000	23	25	27
£1000-£2000	29	32	36
£2000 and over	45	48	52

Source: HMRC (2015, table 12).

Note: lower and upper bounds refer to 95% confidence intervals.

Table 3 Pension Credit weekly benefits by Family Type, Claimed or not, and Element, Financial Year 2013-14 (£)

Element	Family type	Claimed	Not claimed	
		Mean value	Mean value	Median value
Guarantee Credit ^a	Single men	72	71	55
	Single women	61	54	35
	Couples	94	83	59
Savings Credit	Single men	11	8	8
	Single women	11	9	9
	Couples	12	10	9

Source: DWP (2015a, tables 2.3.8 and 2.3.11)

Note: (a) Includes some elements of Savings Credit are combined with Guarantee Credit. See the text to show how this is possible.

Table 4 Effect on provider income of one additional outpatient attendance, select specialties, financial year 2014-15 (£)

Scale of payment	Specialty	New outpatient	Return outpatient
(% of average cost)		(£)	(£)
100	General surgery	140.00	81.00
100	General medicine	178.00	101.00
90	General surgery	126.00	72.90
90	General medicine	160.20	90.90
50	General surgery	70.00	40.50
50	General medicine	89.00	50.50

Notes:

Data refers to single professional engagements.

No adjustment for Market Forces Factor.

Source: Monitor and NHS England (2013a, Outpatients).

Table 5 Effect of Trial on Number of School Meals, by stage and whether registered for FSM

Local Authority	Registered FSMs		Not-Registered FSMs	
	Extra from Trial	Extra from Trial	Before Trial	Extra from Trial
	P1-P3	P4-P7	P1-P3	P1-P3
Glasgow	172	36	4514	2011
Fife	83	84	3577	2834
West Dunbartonshire	47	23	809	523
East Ayrshire	47	34	837	874
Scottish Borders	28	-4	1001	967

Notes: See text.

Table 6 Unit costs and charges, £ per meal, 2007-08 prices

Local Authority	Adjusted evaluation	Local Authority	Local Authority
	Marginal Cost	Charges	Average Cost
Glasgow	2.29	1.15	2.65
Fife	1.64	1.55	2.38
West Dunbartonshire	3.32	1.47	2.33
East Ayrshire	2.22	1.56	2.27
Scottish Borders	3.51	1.60	2.64

Source: MacLardie et al (2008, figures 6.2 and 6.7 and table 6.1).

Notes: See text.

Table 7 Cost of increasing take up by registered FSM primary pupils by one meal (£)

Local Authority	2007-08 prices	2014 prices
Glasgow	47	57
Fife	61	69
West Dunbartonshire	42	49
East Ayrshire	40	46
Scottish Borders	214	246

Sources: Local Authority schools catering organisations.

Notes: See text